

Remarks

This is in response to the final Office Action mailed December 14, 2004 and Examiner's Advisory Action mailed April 22, 2005, which provided a final rejection of all pending claims 1-18.

Certain post-final amendments have been requested above, including an amendment to the specification at page 9, line 24, and amendments to claims 1-3, 7-11, 13, and 15-17.

These amendments are believed to be proper, are clarifying in nature so as to neither introduce new matter nor narrow the scope of the claimed subject matter, will not require extensive further consideration or raise new issues, and are believed to place the application in proper condition for reconsideration and allowance. It is further submitted that these amendments will have no preclusive effects during any subsequent proceedings.

An Examiner's Interview was conducted on February 14, 2005 between the Examiner and the Applicant's Attorney to discuss the rejection of the claims and to clarify various issues as set forth below. The Applicant's Attorney thanks the Examiner for his courtesy and professionalism during the interview.

Information Disclosure Statement (IDS) Filed with Application

The present application was originally filed February 22, 2002, and an Information Disclosure Statement (IDS) was filed with the application on that date. The first Office Action mailed July 23, 2004 did not acknowledge this IDS, which led the Applicant's Attorney to include a courtesy copy of the IDS with the Applicant's Response to this first Office Action.

The final Office Action stated that the official USPTO records showed no evidence that an IDS was originally filed with the application. The Office Action further stated that the courtesy copy of the IDS which was supplied by the Applicant in the previous response would not be considered, and suggested that a Petition be filed with the Director pursuant to 37 CFR 1.181 in order to get the IDS considered.

Accordingly, the Applicant is filing herewith a Petition with the Director pursuant to 37 CFR 1.181 to accept the IDS as timely filed. The Applicant respectfully requests consideration of the IDS upon granting of said Petition, and thanks the Examiner for continued attention to this matter.

Acceptance of Drawings

The Applicant gratefully acknowledges acceptance of the drawings filed October 20, 2004.

Rejection of Claims Under 35 U.S.C. §112, First Paragraph

The final Office Action rejected claims 1-18 under 35 U.S.C. §112, first paragraph, for failure to comply with the written description requirement. This rejection is respectfully traversed.

With regard to claim 1, the Office Action stated that it was not clear where Applicant had support for the recited data sector ranges being “non-sequential.” As mentioned previously, post-final amendments have been provided to the specification and claims to better clarify this issue.

Support for the use of the term “non-sequential” can be found including in FIG. 6 and the associated discussion in the specification at page 9, lines 12-30. The disclosed command history table of FIG. 6 provides a preferred arrangement of data sector address ranges (e.g., block 222) associated with the 16 most recently received read commands (not counting the most recently received command, which is under evaluation).

It is believed that one skilled in the art would accordingly understand the term “non-sequential” to mean that the respective blocks of data sector addresses for consecutive read commands are non-sequential with each other. That is, the blocks in FIG. 6 have gaps therebetween; for example, there is a relatively small gap between the blocks for READ CMDS 1 and 2, a relatively larger gap between the blocks for READ CMDS 2 and 3, etc. This comports with an ordinary dictionary definition of non-sequential, i.e., the presence of gaps within an ordered sequence.

As discussed during the Examiner’s Interview, the preferred embodiments are generally directed to evaluating the “non-sequential” characteristics of the most recent 16 commands; that is, to see if the most recently received read command falls in the gaps between the non-sequential read commands (such as exemplified by line 250 for READ CMD A in FIG. 6), or whether the most recently received read command overlaps one of the read commands (such as exemplified by line 264 for READ CMD B in FIG. 6). This enables the system to determine whether a change in read caching strategy might be advantageous. See e.g., page 3, lines 20-32; page 4, lines 24-40; page 12, lines 11-17; page 13, lines 5-17; and the respective operations of blocks 216, 248, 262 and 270 in FIG. 5.

Accordingly, the Applicant respectfully submits that claim 1 meets the written description requirement of 35 U.S.C. §112, first paragraph, in that one skilled in the art

would readily understand the term “non-sequential” to describe the respective data sector ranges to be non-sequential with each other, as graphically illustrated in FIG. 6.

With regard to claims 9 and 13, the amendments presented to these claims also further clarify what is covered by these claims, and it is believed that in view of the foregoing discussion these claims also meet the written description requirement of §112, first paragraph.

Accordingly, the Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1-18 under 35 U.S.C. §112, first paragraph.

Rejection of Claims Under 35 U.S.C. §112, Second Paragraph

Claims 1-8 were further rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. This rejection is also respectfully traversed.

In support of this rejection, the Examiner stated, “it is not clear whether ‘non-sequential data sector ranges’ means the plural data ranges are non-sequential with each other or whether the data sectors within the data sector ranges are non-sequential.” (final Office Action, page 4). It is believed that the above clarifying amendments to independent claim 1, as well as the foregoing discussion, obviates this rejection.

Accordingly, the Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1-8 under 35 U.S.C. §112, second paragraph.

Conclusion

The Applicant respectfully requests reconsideration and allowance of all the pending claims in the application. This is intended to be a complete response to the final Office Action mailed December 14, 2004.

Should any questions arise concerning this response, the Examiner is invited to contact the below listed Attorneys.

Respectfully submitted,

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